pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0114308**
Facility Type	**Municipal**	APS ID	**1093386**
Major / Minor	**Minor**	Authorization ID	**1448325**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Orange Township, Columbia County**	Facility Name	**Orange Township STP**
Applicant Address	2028 State Route 487	Facility Address	Mount Pleasant & Charmond Road
	Orangeville, PA 17859-9029		Orangeville, PA 17859
Applicant Contact	Erika Burkhart	Facility Contact	Alec Engleman
Applicant Phone	(570) 638-5836	Facility Phone	(570) 238-2465
Client ID	74492	Site ID	255538
Ch 94 Load Status	Not Overloaded	Municipality	Orange Township
Connection Status	No Limitations	County	Columbia
Date Application Received	July 20, 2023	EPA Waived?	Yes
Date Application Accepted	July 26, 2023	If No, Reason	

Purpose of Application: Renewal of a NPDES Permit

Summary of Review

The subject facility is a sewage treatment plant serving the area of the Sand Bar and Creekside housing developments in Orange Township, Columbia County. A map of the discharge location is attached (see Attachment A).

Sludge use and disposal description and location(s): The facility's sludge is transferred to other facilities for further processing.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		Keith C. Allison Keith C. Allison / Project Manager	February 22, 2023
X		N. W. H. Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	February 26, 2023

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.013
Latitude	41º 4' 40.66"	Longitude	-76º 25' 51.99"
Quad Name	Bloomsburg, PA	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Fishing Creek (WWF)	Stream Code	27623
NHD Com ID	65639437	RMI	9.8
Drainage Area	274 mi^2	Yield (cfs/mi^2)	0.0613
Q_{7-10} Flow (cfs)	16.8	Q_{7-10} Basis	USGS Gage 01539000, Fishing Creek near Bloomsburg, PA (1940-2008)
Elevation (ft)	590	Slope (ft/ft)	0.0009
Watershed No.	5-C	Chapter 93 Class.	WWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	Suez Water PA near Bloomsburg, PA		
PWS Waters	Fishing Creek	Distance from Outfall (mi)	Approx. 5

Changes Since Last Permit Issuance: The above stream and drainage characteristics were determined for previous reviews and remain applicable.

Other Comments: No downstream water supply is expected to be affected by this discharge at this time with the limitations and monitoring proposed.

Treatment Facility Summary				
Treatment Facility Name: Orange Township WWTP				
WQM Permit No.	**Issuance Date**			
1990406	Original - March 8, 1990 Amendment No. 1 – April 10, 2023			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Extended Aeration	Hypochlorite	0.013
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.013	26	Not Overloaded	Holding Tank	Other WWTP

Changes Since Last Permit Issuance: The facility's comminutor has been removed as approved by WQM Permit No. 1990406 A-1

Other Comments: The treatment, as permitted under WQM No. 1990406 A-1, consists of a pump station, bar screen, aeration tank, clarifier, tablet chlorinator, chlorine contact tank and aerated sludge holding tank.

Compliance History

DMR Data for Outfall 001 (from January 1, 2023 to December 31, 2023)

Parameter	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23
Flow (MGD) Average Monthly	0.0107	0.0063	0.0092	0.0083	0.0039	0.0033	0.0039	0.0049	0.0040	0.0084	0.0105	0.011
Flow (MGD) Daily Maximum	0.0254	0.0158	0.0181	0.0249	0.0139	0.0115	0.0119	0.0233	0.113	0.0287	0.0308	0.027
pH (S.U.) Instantaneous Minimum	6.9	6.9	6.9	7.0	6.9	7.0	7.0	6.9	7.0	7.0	6.9	7.0
pH (S.U.) Instantaneous Maximum	7.2	7.2	7.2	7.1	7.1	7.2	7.1	7.1	7.1	7.2	7.2	7.2
DO (mg/L) Instantaneous Minimum	2.0	1.7	1.3	2.3	2.3	2.2	2.3	2.3	2.3	2.4	2.4	2.5
TRC (mg/L) Average Monthly	0.26	0.32	0.34	0.30	0.31	0.31	0.33	0.31	0.31	0.33	0.30	0.31
TRC (mg/L) Instantaneous Maximum	0.39	0.44	0.63	0.42	0.44	0.42	0.42	0.38	0.41	0.43	0.38	0.41
CBOD5 (lbs/day) Average Monthly	< 0.5	< 0.09	< 0.2	< 0.3	< 0.07	< 0.05	< 0.1	< 0.1	< 0.07	< 0.2	< 0.1	< 0.3
CBOD5 (lbs/day) Weekly Average	< 0.5	< 0.1	< 0.2	< 0.3	< 0.08	< 0.07	< 0.2	< 0.1	< 0.09	< 0.2	< 0.2	< 0.3
CBOD5 (mg/L) Average Monthly	< 6.0	< 6.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
CBOD5 (mg/L) Weekly Average	< 6.0	< 6.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	16	4	15	19	6	3	14	11	8	19	17	12
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	27	5	17	25	6	4	28	11	9	32	21	12
BOD5 (mg/L) Raw Sewage Influent Average Monthly	221	267	241	217	238	231	320	267	299	293	422	149
TSS (lbs/day) Average Monthly	< 0.8	< 0.07	< 0.1	< 0.1	< 0.04	< 0.03	0.09	0.1	< 0.08	< 0.2	< 0.07	< 0.3

TSS (lbs/day) Raw Sewage Influent Average Monthly	10	2	12	12	4	2	8	10	4	6	18	10
TSS (lbs/day) Raw Sewage Influent Daily Maximum	12	3	13	13	5	3	16	10	5	9	22	11
TSS (lbs/day) Weekly Average	< 0.8	< 0.08	0.1	< 0.1	0.05	< 0.03	0.2	0.1	0.1	< 0.2	< 0.09	0.4
TSS (mg/L) Average Monthly	< 10.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	2.0	4.0	< 3.0	< 2.0	< 2.0	< 3.0
TSS (mg/L) Raw Sewage Influent Average Monthly	135	156	189	139	187	203	202	242	154	114	443	124
TSS (mg/L) Weekly Average	< 10.0	< 5.0	2.0	< 2.0	2.0	< 2.0	2.0	4.0	4.0	< 2.0	2.0	4.0
Fecal Coliform (No./100 ml) Geometric Mean	< 7	< 4	< 1	55	47	< 1	< 6	108	< 1	2	< 6	< 39
Fecal Coliform (No./100 ml) Instantaneous Maximum	47.1	17.5	1	93.3	261.3	< 1	33.6	107.6	2	3.1	38.8	1553.1
Ammonia (mg/L) Daily Maximum						0.336						

Compliance History, Cont'd	
Summary of Inspections:	The facility has been inspected at least annually by the Department over the past permit term. The most recent inspection on June 15, 2023 noted no violations at the time of inspection. It is noted in the inspection report that Orange Township plans to replace the existing STP in the future.
Other Comments:	A query in WMS found no open violations for Orange Township, Columbia County in eFACTS.

Existing Effluent Limitations and Monitoring Requirements								
Parameter	**Effluent Limitations**						**Monitoring Requirements**	
	Mass Units (lbs/day) (1)		**Concentrations (mg/L)**				**Minimum (2) Measurement Frequency**	**Required Sample Type**
	Average Monthly	**Weekly Average**	**Minimum**	**Average Monthly**	**Weekly Average**	**Instant. Maximum**		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/week	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	2.7	4.3	XXX	25.0	40.0	50	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	3.3	4.9	XXX	30.0	45.0	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.013
Latitude 41º 4' 40.00" **Longitude** -76º 25' 54.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: The above limitations are applicable and included in the existing permit.

Water Quality-Based Limitations

CBOD5, NH3-N & DO

The WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia nitrogen (NH_3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. Modeling was not performed at this time due to considerable dilution available in Fishing Creek (~830:1 at Q_{7-10} conditions) and therefore, the secondary treatment limits listed above should be adequate to protect the receiving stream. Annual monitoring for ammonia-nitrogen is adequate for this discharge. The ammonia-nitrogen concentration for the past permit term averaged 0.5 mg/L.

Total Residual Chlorine

No TRC modeling has been performed due to the significant dilution as noted above. The BAT limit of 0.5 mg/L remains adequate to protect the receiving stream.

Toxics Management

No further "Reasonable Potential Analysis" was performed at this time to determine additional parameters as candidates for limitations or monitoring for this minor STP with no industrial influent.

Chesapeake Bay/Nutrient Requirements

According to the Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, this facility is a Phase 5 Chesapeake Bay sewage discharger, and as such requires no nutrient loading limits. Per a review of the facility DMRs over a previous permit term the Total Nitrogen averaged 24 mg/L and the Total Phosphorus averaged 3.6 mg/L. Because the nutrients levels in the discharge have adequately been characterized, additional Total Nitrogen and Total Phosphorus monitoring will not be required at this time.

Best Professional Judgment (BPJ) Limitations

Comments: no BPJ limits are necessary beyond the abovementioned technology-based and water quality-based limits.

e. Coli
Annual e. coli monitoring will be required at this time due to recent changes to Chapter 93 of the Departments regulations and Department policy.

Anti-Backsliding
No limitations were made less stringent consistent with the anti-degradation requirements of the Clean Water Act and 40 CFR 122.44(l).

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/week	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	2.7	4.3	XXX	25.0	40.0	50	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	3.3	4.9	XXX	30.0	45.0	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

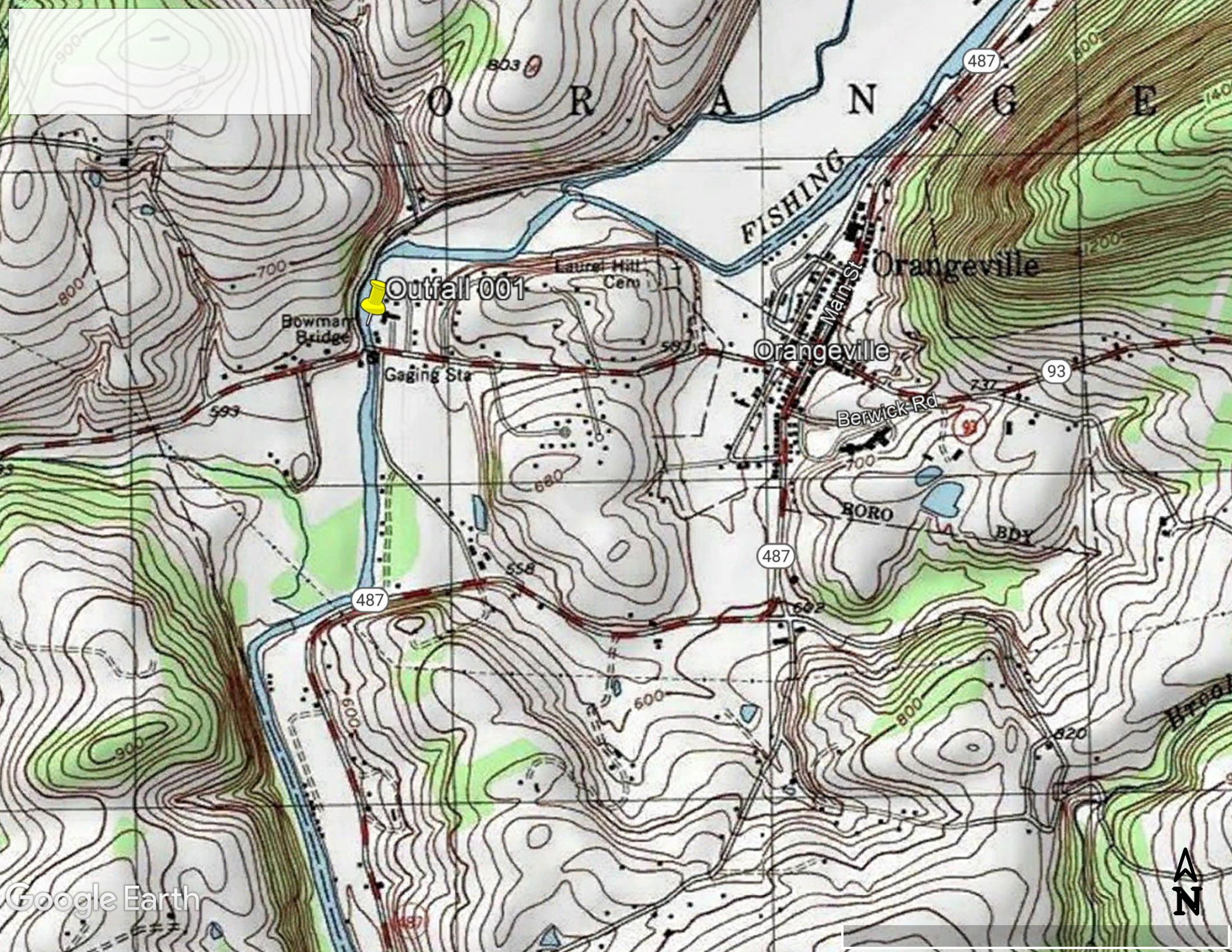
Compliance Sampling Location: Outfall 001

Other Comments: E. coli monitoring is new as mentioned above. The existing monitoring frequencies are adequate for this 0.013 MGD facility.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☒	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☒	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

Attachment:

- Discharge Location Map


Outfall 001
Orangeville
Main St
Berwick Rd
Bowman Bridge
Gaging Sta
Laurel Hill Cem
FISHING
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487
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